

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: LEE, Hong-Seok, et al.)	
)	Group Art Unit: 2629
Serial No.: 10/616,037)	
)	
Filed: July 10, 2003)	Examiner: BODDIE,
)	William
For: REFLECTIVE LIQUID CRYSTAL DISPLAY)	
AND DRIVING METHOD THEREOF)	Confirmation No. 9800

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop: After Final
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In response to the Final Office action dated April 07, 2010 and the subsequent Advisory Action dated June 14, 2010, and in conjunction with the Notice of Appeal filed concurrently herewith, the Applicants submit the following remarks in support of the Pre-Appeal Brief Request for Review:

REMARKS

In response to the Final Office Action dated April 07, 2010 and the subsequent Advisory Action dated June 14, 2010, Applicants respectfully request reconsideration based on at least the following remarks. Applicants submit that the claims as presented herein are in condition for allowance.

Claims 1, 3-8 and 10-20 are pending in the present application. Claims 2 and 9 have been previously cancelled without prejudice. No claims are herein amended.

Applicants respectfully request reconsideration of claims 1, 3-8 and 10-20 based upon at least the following remarks.

Claim Rejections Under 35 U.S.C. § 103

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art and that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references. *In*

re Fine, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

Claims 1, 8 and 12-20 are rejected under 35 U.S.C. 103(a) as being allegedly unpatentable over Baba et al. (US 7,106,350, hereinafter “Baba”) in view of Sato et al. (US 7,030,848, hereinafter “Sato”). Specifically, the Examiner states that Baba teaches all elements of independent claims 1 and 8 except “colors are displayed by color filters or that the first no-light display period occurs after the white light display period,” which the Examiner further states is disclosed by Sato, primarily at FIG. 11d and columns 17, lines 17-33. Applicants respectfully traverse for at least the following reasons.

Independent claims 1 and 8 recite, *inter alia*, that “a second non-display period including a **second no-light display period during which the driver drives the LCD panel to display no light,**” and “**wherein the white light display period, the first no-light display period, the display period and the second no-light display period are sequentially disposed in each frame of the image.**”

On page 6 of the Final Office Action, the Examiner states that FIG. 20F of Baba discloses the white light display period, the first no-light display period, the display period and the second no-light display period. Applicants respectfully note that FIGS. 20E and 20F of Baba show the voltage waveforms of pixels on scanning lines including a sequence of an image period, black period and a reset period, and FIG. 20F of Baba merely shows a voltage waveform of a pixel on a Gt-th scanning line, whose phase is shifted from the phase of the voltage waveform of a pixel on the first scanning line shown in FIG. 20E.

Accordingly, Applicants respectfully note that Baba merely discloses a frame period of voltage waveform of a pixel on a scanning line includes an image period, a black period and a rest period before the next image period, and Baba is silent as to **a second black period, where the white light display period, the first no-light display period, the display period and the second no-light display period are sequentially disposed in each frame of the image.**

In addition, as the Examiner admits on page 7 of the Office Action, Applicants respectfully note that Baba does not disclose the first no-light display period occurs after the white light display period. Therefore, Applicants respectfully submit that Baba does **not** disclose “a second non-display period including a **second no-light display period during which the driver drives the LCD panel to display no light,**” and “**wherein the white light display period, the first no-light display period, the display period and the second no-light display period are sequentially disposed in each frame of the image,**” as in claims 1 and 8.

Furthermore, Applicants respectfully submit that Sato does not cure the deficiencies noted above

with respect to Baba. Applicants respectfully note that, as shown in FIGS. 11C and 11D, Sato merely discloses one frame period includes a red sub-frame period, a green sub-frame period, a blue sub-frame period and a white sub-frame period. More particularly, Sato merely discloses that each of the sub-frame periods includes a video signal write period Ta, a liquid crystal response period Tb, a light-emitting time Th, a first non-video signal write period Tc1 and a second non-video signal write period Tc2.

Although the Examiner states on page 3 of the Final Office Action that FIG. 11D of Sato discloses a first non-display period (Ta, Tb) and a second non-display period (Tc1, Tc2), Applicants respectfully note the first non-display period (Ta, Tb) and the second non-display period (Tc1, Tc2) are not analogous to the first no-light display period and the second no-light display period of claims 1 and 8 during which the driver drives the LCD panel to display no light because, as shown in FIG. 11C, during the first non-display period (Ta, Tb) and the second non-display period (Tc1, Tc2), the driver of Sato drives the LCD panel not to display no light but to write video signals and non-video signals, and to thereby control transmittance in pixels on respective rows of the liquid crystal display panel, and the light emitting diodes in a backlight are controlled not to emit lights. Therefore, Applicants respectfully submit that Sato does **not** disclose “**a second no-light display period during which the driver drives the LCD panel to display no light,**” and “**wherein the white light display period, the first no-light display period, the display period and the second no-light display period are sequentially disposed in each frame of the image,**” as in claims 1 and 8.

As a result, neither Baba nor Sato, either alone or in any combination thereof, teach or suggest “**a second no-light display period during which the driver drives the LCD panel to display no light,**” and “**wherein the white light display period, the first no-light display period, the display period and the second no-light display period are sequentially disposed in each frame of the image,**” as recited in independent claims 1 and 8.

Thus, it is respectfully submitted that claims 1 and 8, including claims depending therefrom, i.e., claims 12-20, define over the cited references.

Accordingly, it is respectfully requested that the rejection of claims 1, 8 and 12-20 under 35 U.S.C. § 103(a) be withdrawn.

Claims 3-5, 7 and 10-11 are rejected under 35 U.S.C. 103(a) as being allegedly unpatentable over Baba in view of Sato and further in view of Iwauchi (US 5,841,492, hereinafter “Iwauchi.”). Specifically, the Examiner states that Baba in view of Sato teach all elements of the above-listed claims except: “wherein the plurality of color filters are transmissive color filters attached to an upper portion of the LCD panel” (claims 3 and 10); “a reflecting plate” (claim 4); “wherein the color filters are reflective and

attached to the lower portion of the LCD panel” (claims 5 and 11); or “wherein the plurality of color filters of the reflective cooler filter are made of dielectrics having different indices of refraction” (claim 7), which the Examiner further states is taught by Iwauchi, primarily at FIG. 1, 2a and 6, and columns 13-14. Applicants respectfully traverse for at least the following reasons.

Independent claims 1 and 8, from which claims 3-5, 7 and 10-11 depend, are submitted as being allowable for defining over Baba in view of Sato, as discussed above.

Furthermore, it is respectfully submitted that: “wherein the plurality of color filters are transmissive color filters attached to an upper portion of the LCD panel” (claims 3 and 10); “a reflecting plate” (claim 4); “wherein the color filters are reflective and attached to the lower portion of the LCD panel” (claims 5 and 11); or “wherein the plurality of color filters of the reflective cooler filter are made of dielectrics having different indices of refraction” (claim 7), as allegedly taught by Iwauchi, or any other disclosure of Iwauchi, does not cure the deficiencies noted above with respect to Baba in view of Sato.

Thus, Applicants respectfully submit that claims 3-5, 7 and 10-11 of the present application are patentable over the cited references.

Accordingly, it is respectfully requested that the rejection of claims 3-5, 7 and 10-11 under 35 U.S.C. § 103(a) be withdrawn.

Claim 6 is rejected under 35 U.S.C. 103(a) as being allegedly unpatentable over Baba in view of Sato in view of Iwauchi and further in view of Alvarez (US 5,131,736, hereinafter “Alvarez.”). Specifically, the Examiner states that Baba in view of Sato in view of Iwauchi teaches all elements claim 6 except “wherein the plurality of color filters are made of photonic crystals, which are alternate arrays of dielectrics,” which the Examiner further states is taught by Alvarez, primarily at column 3, lines 27-45. Applicants respectfully traverse for at least the following reasons.

Independent claim 1, from which claim 6 depends, is submitted as being allowable for defining over Baba in view of Sato and Iwauchi, as discussed above.

Furthermore, it is respectfully submitted that “wherein the plurality of color filters are made of photonic crystals, which are alternate arrays of dielectrics,” as allegedly taught by Alvarez, or any other disclosure of Alvarez, does not cure the deficiencies noted above with respect to Baba in view of Sato and Iwauchi.

Thus, Applicants respectfully submit that claim 6 of the present application is patentable over the cited references.

Accordingly, it is respectfully requested that the rejection of claim 6 under 35 U.S.C. § 103(a) be withdrawn.

Conclusion

In view of the foregoing remarks distinguishing the prior art of record, Applicants respectfully submit that this application is in condition for allowance. Early notification to this effect is requested. The Examiner is invited to contact Applicants' attorneys at the below-listed telephone number regarding this Amendment or otherwise regarding the present application in order to address any questions or remaining issues concerning the same.

If there are any charges due in connection with this response, including for any necessary extensions of time under 37 C.F.R. 1.136(a) or 1.136(b), for which the Applicants hereby respectfully petition, please charge them to Deposit Account 06-1130.

Respectfully submitted,

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